

10/776,840

**EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	2	("3887379").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/20 14:08
S2	2	("6004536").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/20 14:09
S3	2	("6077585").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/20 14:10
S4	36	dye near1 azide\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 14:10
S5	45	dye\$1 near1 azide\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 14:25
S6	11	S5 and oxygen	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 14:37
S7	3	S6 and phototherapy	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 14:37
S8	78	phototherapy and dye\$1 and azide	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 14:47

## EAST Search History

S9	385	azide\$1 and phthalocyanine\$1 and porphyrin\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 14:48
S10	22	azide\$1 same phthalocyanine\$1 same porphyrin\$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 14:49
S11	7	S10 and (phototherapy or therapy)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 14:59
S12	2	("6858704").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/20 15:00
S13	2	("6485704").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/20 15:02
S14	0	("(azide\$1orperoxide\$1ordisulfide\$1orsulfenate\$1)same(phthalocyanine\$1orporphyrin\$1)").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/12/20 15:03
S15	1854	(azide\$1 or peroxide\$1 or disulfide\$1 or sulfenate\$1) same (phthalocyanine\$1 or porphyrin\$1)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 15:05
S16	186	S15 and (therapy or tissue adj damage or phototherapy)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 15:05
S17	18	S15 same (therapy or tissue adj damage or phototherapy)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/12/20 15:05

10/776,840

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NEWS 21	NOV 20	CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS 22	NOV 20	CA/CAPLUS to MARPAT accession number crossover limit increased to 50,000
NEWS 23	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS 24	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS 25	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS 26	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS 27	DEC 18	CA/CAPLUS pre-1967 chemical substance index entries enhanced with preparation role
NEWS 28	DEC 18	CA/CAPLUS patent kind codes updated
NEWS 29	DEC 18	MARPAT to CA/CAPLUS accession number crossover limit increased to 50,000
NEWS 30	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS EXPRESS		NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.
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=> s azide and phthalocyanine and porphyrin

42506 AZIDE

8872 AZIDES

45002 AZIDE

(AZIDE OR AZIDES)

35760 PHTHALOCYANINE

6826 PHTHALOCYANINES

36492 PHTHALOCYANINE

(PHTHALOCYANINE OR PHTHALOCYANINES)

36222 PORPHYRIN

25130 PORPHYRINS

42568 PORPHYRIN

(PORPHYRIN OR PORPHYRINS)

L1            9 AZIDE AND PHTHALOCYANINE AND PORPHYRIN

=> s 11 and therapy

300345 THERAPY

26193 THERAPIES

## 314443 THERAPY

(THERAPY OR THERAPIES)

L2

3 L1 AND THERAPY

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L2 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:652430 CAPLUS

DOCUMENT NUMBER: 141:179566

TITLE: Compounds for dual photodiagnosis and therapy

INVENTOR(S): Rajagopalan, Raghavan; Achilefu, Samuel I.; Bugaj, Joseph E.; Dorshow, Richard B.; Periasamy, Muthunadar P.

PATENT ASSIGNEE(S): Mallinckrodt Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 15 pp., Cont.-in-part of U.S. Ser. No. 898,885.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004156783	A1	20040812	US 2003-685172	20031014
US 2003017164	A1	20030123	US 2001-898885	20010703
US 2004161430	A1	20040819	US 2004-776840	20040211
AU 2004282131	A1	20050428	AU 2004-282131	20041007
CA 2542694	A1	20050428	CA 2004-2542694	20041007
WO 2005037928	A2	20050428	WO 2004-US32859	20041007
WO 2005037928	A3	20050616		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1680472	A2	20060719	EP 2004-794269	20041007
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			

PRIORITY APPLN. INFO.:  
US 2001-898885 A2 20010703  
US 2003-685172 A 20031014  
WO 2004-US32859 W 20041007

AB The invention discloses compds. and compns. for dual phototherapy and combined therapy and diagnosis of tumors and other lesions. The compds. have a Dye that, when photoactivated, operates via Type I and/or Type II mechanisms. Other Dye or azide components may operate by the same or different mechanisms. Selection of particular components in a compound, and formulation of the compound(s) in a composition permit different

activation wavelengths to be used for different therapies. A targeting moiety may be added to the compound or composition so that the Dye locates at a particular site, such as a hormone-sensitive tumor, for diagnosis and/or treatment. The compds. and compns. may be incorporated within liposomes.

L2 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:42026 CAPLUS

DOCUMENT NUMBER: 138:78436  
 TITLE: Dye-azide compounds for dual phototherapy  
 INVENTOR(S): Rajagopalan, Raghavan; Achilefu, Samuel I.; Bugaj, Joseph E.; Dorshow, Richard B.  
 PATENT ASSIGNEE(S): Mallinckrodt Inc., USA  
 SOURCE: PCT Int. Appl., 40 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003003806	A2	20030116	WO 2002-US19187	20020618
WO 2003003806	A3	20040408		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003017164	A1	20030123	US 2001-898885	20010703
CA 2452752	A1	20030116	CA 2002-2452752	20020618
AU 2002320098	A1	20030121	AU 2002-320098	20020618
EP 1427712	A2	20040616	EP 2002-749597	20020618
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2005503364	T	20050203	JP 2003-509836	20020618
US 2004161430	A1	20040819	US 2004-776840	20040211
PRIORITY APPLN. INFO.:			US 2001-898885	A 20010703
			WO 2002-US19187	W 20020618

OTHER SOURCE(S): MARPAT 138:78436

AB The present invention discloses dye-azide derivs. and their bioconjugates for dual phototherapy of tumors and other lesions. The compds. of the present invention may contain either a mixture of Type 1 (direct energy or electron transfer from photosensitizer to cellular components) and Type 2 (singlet oxygen-mediated therapeutic action) agents or a single entity that integrates both units in the same mols. The compds. are designed to produce both Type 1 and Type 2 phototherapeutic effect at once using dual wavelength light source that will produce singlet oxygen and nitrene at the lesion of interest. This is accomplished using 3 types of formulation: homogenous mixts. of Type 1 and Type 2 agents alone, heterogeneous mixts. of Type 1 and Type 2 agents, or a single mol. entity containing both Type 1 and Type 2 functionalities. Suggested as single mol. entities are dyes (cyanines, porphyrins, phthalocyanines, etc.) conjugated to both organic azides and to biomol. targeting agents such as receptor (somatostatin, steroid, carbohydrate, etc.)-binding mols.

L2 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:789050 CAPLUS  
 DOCUMENT NUMBER: 130:20543  
 TITLE: Photodynamic and sonodynamic therapy and agents and system for use therefor  
 INVENTOR(S): Iger, Yoni  
 PATENT ASSIGNEE(S): Technion Research and Development Foundation Ltd., Israel  
 SOURCE: PCT Int. Appl., 45 pp.

DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9852610	A1	19981126	WO 1998-IL231	19980520
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
CA 2290450	A1	19981126	CA 1998-2290450	19980520
AU 9874475	A	19981211	AU 1998-74475	19980520
EP 983090	A1	20000308	EP 1998-921707	19980520
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			

PRIORITY APPLN. INFO.: IL 1997-120891 A 19970522  
WO 1998-IL231 W 19980520

AB The present invention provides a method and system for destruction of biol. tissues, such as tumors, by various types of irradiation such as ultrasound or light using a helper agent or combination of agents, optionally together with an agent capable of being sensitized by the irradiation. The helper agent may release singlet oxygen, oxidizing compds., free radicals or can be an agent capable of undergoing an exothermal reaction. The present invention further provides a method for terminating the destructive activity of various energy-sensitizable agents. Several examples are provided on reduction of tryptophan fluorescence in the presence of photosensitizable compds. TPPS2, TPPS4 and AlPcS3 after ultrasound irradiation in the presence or absence of oxygen.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L3 6 L1 NOT L2

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L3 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:530976 CAPLUS

DOCUMENT NUMBER: 133:259194

TITLE: Photobleaching studies on azabenzoporphyrins and related systems: a comparison of the photobleaching of the zinc(II) complexes of the tetrabenzoporphyrin, 5-azadibenzo(b,g)porphyrin and phthalocyanine systems

AUTHOR(S): Bonnett, Raymond; Martinez, Gabriel

CORPORATE SOURCE: Department of Chemistry, Queen Mary and Westfield College, London, E1 4NS, UK

SOURCE: Journal of Porphyrins and Phthalocyanines (2000), 4(5), 544-550

CODEN: JPPHFZ; ISSN: 1088-4246

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The kinetics of photobleaching of zinc(II) tetra-tert-butyltetrabenzoporphyrin (I), zinc(II) 13, 17-diethyl-12,18-dimethyl-5-

azadibenzo[b,g]porphyrin 2 and zinc(II) tetra-tert-butylphthalocyanine (III) were studied. In methanol containing ca 0.1% pyridine, complex I underwent photoaggregation, II was relatively photostable, while III underwent a smooth true photobleaching process with loss of intensity across the visible region. Where appropriate, apparent first-order rate consts. for the photodiminution of the  $\alpha$ -band in the spectra were reported, and the effects of solvent variation and of additives were measured. It has not been possible to provide an overall rationalization of the solvent effects, but the effects of additives support the view that the photooxidative processes involve singlet oxygen. Expts. with potassium superoxide did not support superoxide involvement. Preparative expts with I and III were performed in methanol. In the case of I a large recovery of the starting material was observed, indicating that the photoaggregation did not involve the formation of new covalent bonds. In the case of III gives rise to at least five products (besides the starting material). Two of these, isolated in low yields (<5%), are identified as a fragmentation (depolymer.) product, 4-tert-butylphthalonitrile, and the expected oxidative product, 4-tert-butylphthalimide. The results are discussed and conclusions drawn.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:613433 CAPLUS

DOCUMENT NUMBER: 131:336863

TITLE: Approaches to the stepwise synthesis of benzoporphyrins and phthalocyanines. Part 2: synthesis of a 5-azadibenzo[b,g]porphyrin from benzopyrromethene intermediates

AUTHOR(S): Bonnett, Raymond; Okolo, Kawulia

CORPORATE SOURCE: Department of Chemistry, Queen Mary and Westfield College, London, E1 4NS, UK

SOURCE: Journal of Porphyrins and Phthalocyanines (1999), 3(6/7), 530-536

CODEN: JPPHFZ; ISSN: 1088-4246

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB An azadibenzoporphyrin, 13,17-diethyl-12,18-dimethyl-5-azadibenzo[b,g]porphyrin, is prepared by a 2 + 2 synthesis from a 1-bromobenzopyrromethene precursor by treatment with sodium azide at 140°C in solvent. Yields depend on solvent, 35% being obtained in quinoline and 84% in DMF. Treatment of 1-bromo-8-ethyl-7,9-dimethylbenzopyrromethene hydrobromide with sodium azide at 60°C in DMF gives 8-ethyl-7,9-dimethyltetrazolo[1,5-i]benzopyrromethene which appears to be, or to lead to, an intermediate in the macrocyclization at the higher temperature

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:171824 CAPLUS

DOCUMENT NUMBER: 128:258678

TITLE: Azide promotion of alkane oxidations catalyzed by metal complexes in solution

AUTHOR(S): Lyons, James E.; Ellis, Jr., Paul E.; Shaikh, Shahid N.

CORPORATE SOURCE: Sun Company, Research and Development Department, Marcus Hook, PA, 19061, USA

SOURCE: Inorganica Chimica Acta (1998), 270(1,2), 162-168

CODEN: ICHAA3; ISSN: 0020-1693

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal



LANGUAGE: English

AB The oxidation of light alkanes catalyzed by metal complexes in solution is promoted by Group 1 metal azides. Yields of oxygenated reaction products are greatly enhanced when catalytic amts. of azides are added to the reaction mixture. The addition of sodium azide to oxidation catalyzed by transition metal acetylacetonates, heteropolyacids, polyoxometallates, phthalocyanines, bis-(pyridylimino)isoindolines, porphyrins and Schiff bases significantly enhances the rate of low-temperature catalytic oxidation reactions in the liquid phase. Earlier work showed that Cr(III), Mn(III), Fe(III) and Co(III) complexes of electron-deficient macrocyclic complexes exhibited remarkable catalytic activity for oxidizing light alkanes. Such complexes bearing axial azide ligands were far more active than their axial chloride or acetate counterparts.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:406914 CAPLUS

DOCUMENT NUMBER: 127:146217

TITLE: Remarkable functional aspects of myoglobin induced by diazaheme prosthetic group

AUTHOR(S): Neya, Saburo; Hori, Hiroshi; Imai, Kiyohiro; Kawamura-Konishi, Yasuko; Suzuki, Haruo; Shiro, Yoshitsugu; Iizuka, Tetsutaro; Funasaki, Noriaki

CORPORATE SOURCE: Department of Physical Chemistry, Kyoto Pharmaceutical University, Kyoto, 607, Japan

SOURCE: Journal of Biochemistry (Tokyo) (1997), 121(4), 654-660

CODEN: JOBIAO; ISSN: 0021-924X

PUBLISHER: Japanese Biochemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The iron complex of  $\beta, \delta$ -diazamesoporphyrin III, a mol. hybrid of porphyrin and phthalocyanine, was incorporated into apomyoglobin to investigate novel biol. aspects of myoglobin. The reconstituted ferric protein forms an internal hemichrome with the iron-bound distal histidine. The reduced ferrous protein has extraordinarily high affinities for O<sub>2</sub> and CO. The ferrous myoglobin is capable of strong binding with pyridine, imidazole, cyanide, and azide, and reacts moderately with ammonia. The NO complex exhibited 5-coordinate to 6-coordinate transition over 150 min. The instability of 5-coordinate NO heme is consistent with a high affinity of imidazole to the ferrous heme. The kinetic analyses of the ferrous derivs. suggest the importance of the  $\pi$  orbitals in neutral ligands as well as the neg. charges in anionic ligands. A high affinity of imidazole to ferrous diazaheme accounts for the internal hemichrome formation in ferrous myoglobin containing phthalocyanines.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:461595 CAPLUS

DOCUMENT NUMBER: 119:61595

TITLE: First example of a mixed-ligand bimetallic (Fe-Fe) N-bridged dimer: ( $\mu$ -nitrido)[((tetraphenylporphyrinato)iron)(phthalocyaninato)iron]

AUTHOR(S): Ercolani, C.; Hewage, S.; Heucher, R.; Rossi, G.

CORPORATE SOURCE: Dip. Chim., Univ. Roma "La Sapienza", Rome, Italy

SOURCE: Inorganic Chemistry (1993), 32(13), 2975-7

CODEN: INOCAJ; ISSN: 0020-1669

DOCUMENT TYPE: Journal

LANGUAGE: English

AB (TPP)FeNFePc (TPPH2 = tetraphenylporphyrin; Pch2 = phthalocyanine) was prepared and characterized by elemental anal., TGA, magnetic susceptibility, and spectral (IR, ESR, Moessbauer) methods. The Fe-N-Fe moiety is linear and the unpaired electron is essentially localized on the Fe-N-Fe bond system with significant N atom character.

L3 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:233757 CAPLUS

DOCUMENT NUMBER: 116:233757

TITLE: Fluorophore- polyoxyhydrocarbyl moiety conjugates as markers for fluorescence immunoassays and other applications, and preparation of relevant phthalocyanine and porphyrin derivatives

INVENTOR(S): Dandliker, Walter B.; Hsu, Mao Lin

PATENT ASSIGNEE(S): Diatron Corp., USA

SOURCE: PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 9

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9118007	A1	19911128	WO 1991-US3426	19910515
W: CA, FI, JP, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2082934	A1	19911116	CA 1991-2082934	19910515
CA 2082934	C	20030805		
EP 528991	A1	19930303	EP 1991-911322	19910515
EP 528991	B1	20010926		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05507518	T	19931028	JP 1991-510827	19910515
AT 206124	T	20011015	AT 1991-911322	19910515
ES 2164043	T3	20020216	ES 1991-911322	19910515
PRIORITY APPLN. INFO.:			US 1990-524212	A 19900515
			WO 1991-US3426	W 19910515

AB The title fluorescent dyes are free of aggregation and serum binding and are suitable for e.g. fluorescence immunoassays. Thus, a digoxin conjugate of phthalocyanine was prepared from a sulfonated phthalocyanine  $\beta$ -alanine derivative (preparation given) and 3-amino digoxigenin. The conjugate was further reacted with PEG Phenol 750. In a test for binding activity to anti-digoxin antibody monitored by transient-state polarized fluorescence, a trace amount of the phthalocyanine-digoxin-PEG Phenol conjugate was dissolved in saline-azide-phosphate buffer containing human serum and antibody. A change of 0.056 in polarization was observed over that in the control with no antibody. Preparation of a variety of porphyrin derivs. is included.

=> s nitrene and azo-dye

2341 NITRENE

892 NITRENES

2639 NITRENE

(NITRENE OR NITRENES)

76505 AZO

25 AZOS

76512 AZO

(AZO OR AZOS)

260938 DYE

216160 DYES  
341790 DYE  
(DYE OR DYES)  
38310 AZO-DYE  
(AZO(W) DYE)

L4 10 'NITRENE' AND AZO-DYE

=> s 14 and therapy  
300345 THERAPY  
26193 THERAPIES  
314443 THERAPY  
(THERAPY OR THERAPIES)

L5 1 L4 AND THERAPY

=> d 11 ibib abs hitstr tot

L1 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 2004:652430 CAPLUS  
DOCUMENT NUMBER: 141:179566  
TITLE: Compounds for dual photodiagnosis and therapy  
INVENTOR(S): Rajagopalan, Raghavan; Achilefu, Samuel I.; Bugaj,  
Joseph E.; Dorshow, Richard B.; Periasamy, Muthunadar  
P.  
PATENT ASSIGNEE(S): Mallinckrodt Inc., USA  
SOURCE: U.S. Pat. Appl. Publ., 15 pp., Cont.-in-part of U.S.  
Ser. No. 898,885.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004156783	A1	20040812	US 2003-685172	20031014
US 2003017164	A1	20030123	US 2001-898885	20010703
US 2004161430	A1	20040819	US 2004-776840	20040211
AU 2004282131	A1	20050428	AU 2004-282131	20041007
CA 2542694	A1	20050428	CA 2004-2542694	20041007
WO 2005037928	A2	20050428	WO 2004-US32859	20041007
WO 2005037928	A3	20050616		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1680472	A2	20060719	EP 2004-794269	20041007
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
PRIORITY APPLN. INFO.:			US 2001-898885	A2 20010703
			US 2003-685172	A 20031014
			WO 2004-US32859	W 20041007
AB The invention discloses compds. and compns. for dual phototherapy and combined therapy and diagnosis of tumors and other lesions. The compds. have a Dye that, when photoactivated, operates via Type I and/or Type II mechanisms. Other Dye or azide components may operate by the same or different mechanisms. Selection of particular components in a				

compound, and formulation of the compound(s) in a composition permit different activation wavelengths to be used for different therapies. A targeting moiety may be added to the compound or composition so that the Dye locates at a particular site, such as a hormone-sensitive tumor, for diagnosis and/or treatment. The compds. and compns. may be incorporated within liposomes.

L1 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:42026 CAPLUS  
DOCUMENT NUMBER: 138:78436  
TITLE: Dye-azide compounds for dual phototherapy  
INVENTOR(S): Rajagopalan, Raghavan; Achilefu, Samuel I.; Bugaj, Joseph E.; Dorshow, Richard B.  
PATENT ASSIGNEE(S): Mallinckrodt Inc., USA  
SOURCE: PCT Int. Appl., 40 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003003806	A2	20030116	WO 2002-US19187	20020618
WO 2003003806	A3	20040408		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2003017164	A1	20030123	US 2001-898885	20010703
CA 2452752	A1	20030116	CA 2002-2452752	20020618
AU 2002320098	A1	20030121	AU 2002-320098	20020618
EP 1427712	A2	20040616	EP 2002-749597	20020618
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2005503364	T	20050203	JP 2003-509836	20020618
US 2004161430	A1	20040819	US 2004-776840	20040211
PRIORITY APPLN. INFO.:			US 2001-898885	A 20010703
			WO 2002-US19187	W 20020618

OTHER SOURCE(S): MARPAT 138:78436

AB The present invention discloses dye-azide derivs. and their bioconjugates for dual phototherapy of tumors and other lesions. The compds. of the present invention may contain either a mixture of Type 1 (direct energy or electron transfer from photosensitizer to cellular components) and Type 2 (singlet oxygen-mediated therapeutic action) agents or a single entity that integrates both units in the same mols. The compds. are designed to produce both Type 1 and Type 2 phototherapeutic effect at once using dual wavelength light source that will produce singlet oxygen and nitrene at the lesion of interest. This is accomplished using 3 types of formulation: homogenous mixts. of Type 1 and Type 2 agents alone, heterogeneous mixts. of Type 1 and Type 2 agents, or a single mol. entity containing both Type 1 and Type 2 functionalities. Suggested as single mol. entities are dyes (cyanines, porphyrins, phthalocyanines, etc.) conjugated to both organic azides and to biomol. targeting agents such as receptor (somatostatin, steroid, carbohydrate, etc.)-binding mols.

L1 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:530976 CAPLUS  
DOCUMENT NUMBER: 133:259194  
TITLE: Photobleaching studies on azabenzoporphyrins and related systems: a comparison of the photobleaching of the zinc(II) complexes of the tetrabenzoporphyrin, 5-azadibenzo(b,g)porphyrin and phthalocyanine systems  
AUTHOR(S): Bonnett, Raymond; Martinez, Gabriel  
CORPORATE SOURCE: Department of Chemistry, Queen Mary and Westfield College, London, E1 4NS, UK  
SOURCE: Journal of Porphyrins and Phthalocyanines (2000), 4(5), 544-550  
CODEN: JPPHFZ; ISSN: 1088-4246  
PUBLISHER: John Wiley & Sons Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The kinetics of photobleaching of zinc(II) tetra-tert-butyltetrabenzoporphyrin (I), zinc(II) 13, 17-diethyl-12,18-dimethyl-5-azadibenzo[b,g]porphyrin 2 and zinc(II) tetra-tert-butylphthalocyanine (III) were studied. In methanol containing ca 0.1% pyridine, complex I underwent photoaggregation, II was relatively photostable, while III underwent a smooth true photobleaching process with loss of intensity across the visible region. Where appropriate, apparent first-order rate consts. for the photodiminution of the  $\alpha$ -band in the spectra were reported, and the effects of solvent variation and of additives were measured. It has not been possible to provide an overall rationalization of the solvent effects, but the effects of additives support the view that the photooxidative processes involve singlet oxygen. Expts. with potassium superoxide did not support superoxide involvement. Preparative expts with I and III were performed in methanol. In the case of I a large recovery of the starting material was observed, indicating that the photoaggregation did not involve the formation of new covalent bonds. In the case of III gives rise to at least five products (besides the starting material). Two of these, isolated in low yields (<5%), are identified as a fragmentation (depolymer.) product, 4-tert-butylphthalonitrile, and the expected oxidative product, 4-tert-butylphthalimide. The results are discussed and conclusions drawn.  
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:613433 CAPLUS  
DOCUMENT NUMBER: 131:336863  
TITLE: Approaches to the stepwise synthesis of benzoporphyrins and phthalocyanines. Part 2: synthesis of a 5-azadibenzo[b,g]porphyrin from benzopyrromethene intermediates  
AUTHOR(S): Bonnett, Raymond; Okolo, Kawulia  
CORPORATE SOURCE: Department of Chemistry, Queen Mary and Westfield College, London, E1 4NS, UK  
SOURCE: Journal of Porphyrins and Phthalocyanines (1999), 3(6/7), 530-536  
CODEN: JPPHFZ; ISSN: 1088-4246  
PUBLISHER: John Wiley & Sons Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB An azadibenzoporphyrin, 13,17-diethyl-12,18-dimethyl-5-azadibenzo[b,g]porphyrin, is prepared by a 2 + 2 synthesis from a 1-bromobenzopyrromethene precursor by treatment with sodium azide at 140°C in solvent. Yields depend on solvent, 35% being obtained in quinoline and 84% in DMF. Treatment of 1-bromo-8-ethyl-7,9-dimethylbenzopyrromethene hydrobromide with sodium azide at 60°C in DMF gives 8-ethyl-7,9-dimethyltetrazolo[1,5-

i]benzopyrromethene which appears to be, or to lead to, an intermediate in the macrocyclization at the higher temperature  
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1998:789050 CAPLUS  
DOCUMENT NUMBER: 130:20543  
TITLE: Photodynamic and sonodynamic therapy and agents and system for use therefor  
INVENTOR(S): Iger, Yoni  
PATENT ASSIGNEE(S): Technion Research and Development Foundation Ltd., Israel  
SOURCE: PCT Int. Appl., 45 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9852610	A1	19981126	WO 1998-IL231	19980520
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
CA 2290450	A1	19981126	CA 1998-2290450	19980520
AU 9874475	A	19981211	AU 1998-74475	19980520
EP 983090	A1	20000308	EP 1998-921707	19980520
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
PRIORITY APPLN. INFO.:			IL 1997-120891	A 19970522
			WO 1998-IL231	W 19980520

AB The present invention provides a method and system for destruction of biol. tissues, such as tumors, by various types of irradiation such as ultrasound or light using a helper agent or combination of agents, optionally together with an agent capable of being sensitized by the irradiation. The helper agent may release singlet oxygen, oxidizing compds., free radicals or can be an agent capable of undergoing an exothermal reaction. The present invention further provides a method for terminating the destructive activity of various energy-sensitizable agents. Several examples are provided on reduction of tryptophan fluorescence in the presence of photosensitizable compds. TPPS2, TPPS4 and AlPcS3 after ultrasound irradiation in the presence or absence of oxygen.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1998:171824 CAPLUS  
DOCUMENT NUMBER: 128:258678  
TITLE: Azide promotion of alkane oxidations catalyzed by metal complexes in solution  
AUTHOR(S): Lyons, James E.; Ellis, Jr., Paul E.; Shaikh, Shahid N.  
CORPORATE SOURCE: Sun Company, Research and Development Department, Marcus Hook, PA, 19061, USA  
SOURCE: Inorganica Chimica Acta (1998), 270(1,2), 162-168  
CODEN: ICHAA3; ISSN: 0020-1693

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The oxidation of light alkanes catalyzed by metal complexes in solution is promoted by Group 1 metal azides. Yields of oxygenated reaction products are greatly enhanced when catalytic amts. of azides are added to the reaction mixture. The addition of sodium azide to oxidation catalyzed by transition metal acetylacetonates, heteropolyacids, polyoxometallates, phthalocyanines, bis-(pyridylimino)isoindolines, porphyrins and Schiff bases significantly enhances the rate of low-temperature catalytic oxidation reactions in the liquid phase. Earlier work showed that Cr(III), Mn(III), Fe(III) and Co(III) complexes of electron-deficient macrocyclic complexes exhibited remarkable catalytic activity for oxidizing light alkanes. Such complexes bearing axial azide ligands were far more active than their axial chloride or acetate counterparts.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:406914 CAPLUS

DOCUMENT NUMBER: 127:146217

TITLE: Remarkable functional aspects of myoglobin induced by diazaheme prosthetic group

AUTHOR(S): Neya, Saburo; Hori, Hiroshi; Imai, Kiyohiro; Kawamura-Konishi, Yasuko; Suzuki, Haruo; Shiro, Yoshitsugu; Iizuka, Tetsutaro; Funasaki, Noriaki

CORPORATE SOURCE: Department of Physical Chemistry, Kyoto Pharmaceutical University, Kyoto, 607, Japan

SOURCE: Journal of Biochemistry (Tokyo) (1997), 121(4), 654-660

CODEN: JOBIAO; ISSN: 0021-924X

PUBLISHER: Japanese Biochemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The iron complex of  $\beta,\delta$ -diazamesoporphyrin III, a mol. hybrid of porphyrin and phthalocyanine, was incorporated into apomyoglobin to investigate novel biol. aspects of myoglobin. The reconstituted ferric protein forms an internal hemichrome with the iron-bound distal histidine. The reduced ferrous protein has extraordinarily high affinities for O<sub>2</sub> and CO. The ferrous myoglobin is capable of strong binding with pyridine, imidazole, cyanide, and azide, and reacts moderately with ammonia. The NO complex exhibited 5-coordinate to 6-coordinate transition over 150 min. The instability of 5-coordinate NO heme is consistent with a high affinity of imidazole to the ferrous heme. The kinetic analyses of the ferrous derivs. suggest the importance of the  $\pi$  orbitals in neutral ligands as well as the neg. charges in anionic ligands. A high affinity of imidazole to ferrous diazaheme accounts for the internal hemichrome formation in ferrous myoglobin containing phthalocyanines.

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:461595 CAPLUS

DOCUMENT NUMBER: 119:61595

TITLE: First example of a mixed-ligand bimetallic (Fe-Fe) N-bridged dimer: ( $\mu$ -nitrido)[((tetraphenylporphyrinato)iron)(phthalocyaninato)iron]

AUTHOR(S): Ercolani, C.; Hewage, S.; Heucher, R.; Rossi, G.

CORPORATE SOURCE: Dip. Chim., Univ. Roma "La Sapienza", Rome, Italy

SOURCE: Inorganic Chemistry (1993), 32(13), 2975-7

DOCUMENT TYPE: Journal

LANGUAGE: English

AB (TPP)FeNFePc (TPPH2 = tetraphenylporphyrin; Pch2 = phthalocyanine) was prepared and characterized by elemental anal., TGA, magnetic susceptibility, and spectral (IR, ESR, Moessbauer) methods. The Fe-N-Fe moiety is linear and the unpaired electron is essentially localized on the Fe-N-Fe bond system with significant N atom character.

L1 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:233757 CAPLUS

DOCUMENT NUMBER: 116:233757

TITLE: Fluorophore- polyoxyhydrocarbyl moiety conjugates as markers for fluorescence immunoassays and other applications, and preparation of relevant phthalocyanine and porphyrin derivatives

INVENTOR(S): Dandliker, Walter B.; Hsu, Mao Lin

PATENT ASSIGNEE(S): Diatron Corp., USA

SOURCE: PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 9

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9118007	A1	19911128	WO 1991-US3426	19910515
W: CA, FI, JP, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2082934	A1	19911116	CA 1991-2082934	19910515
CA 2082934	C	20030805		
EP 528991	A1	19930303	EP 1991-911322	19910515
EP 528991	B1	20010926		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05507518	T	19931028	JP 1991-510827	19910515
AT 206124	T	20011015	AT 1991-911322	19910515
ES 2164043	T3	20020216	ES 1991-911322	19910515
PRIORITY APPLN. INFO.:			US 1990-524212	A 19900515
			WO 1991-US3426	W 19910515

AB The title fluorescent dyes are free of aggregation and serum binding and are suitable for e.g. fluorescence immunoassays. Thus, a digoxin conjugate of phthalocyanine was prepared from a sulfonated phthalocyanine  $\beta$ -alanine derivative (preparation given) and 3-amino digoxigenin. The conjugate was further reacted with PEG Phenol 750. In a test for binding activity to anti-digoxin antibody monitored by transient-state polarized fluorescence, a trace amount of the phthalocyanine-digoxin-PEG Phenol conjugate was dissolved in saline-azide-phosphate buffer containing human serum and antibody. A change of 0.056 in polarization was observed over that in the control with no antibody. Preparation of a variety of porphyrin derivs. is included.

=&gt; d 15 ibib abs hitstr tot

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:42026 CAPLUS

DOCUMENT NUMBER: 138:78436

TITLE: Dye-azide compounds for dual phototherapy

INVENTOR(S): Rajagopalan, Raghavan; Achilefu, Samuel I.; Bugaj, Joseph E.; Dorshow, Richard B.



PATENT ASSIGNEE(S): Mallinckrodt Inc., USA  
 SOURCE: PCT Int. Appl., 40 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003003806	A2	20030116	WO 2002-US19187	20020618
WO 2003003806	A3	20040408		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003017164	A1	20030123	US 2001-898885	20010703
CA 2452752	A1	20030116	CA 2002-2452752	20020618
AU 2002320098	A1	20030121	AU 2002-320098	20020618
EP 1427712	A2	20040616	EP 2002-749597	20020618
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2005503364	T	20050203	JP 2003-509836	20020618
US 2004161430	A1	20040819	US 2004-776840	20040211
PRIORITY APPLN. INFO.:				
			US 2001-898885	A 20010703
			WO 2002-US19187	W 20020618

OTHER SOURCE(S): MARPAT 138:78436

AB The present invention discloses dye-azide derivs. and their bioconjugates for dual phototherapy of tumors and other lesions. The compds. of the present invention may contain either a mixture of Type 1 (direct energy or electron transfer from photosensitizer to cellular components) and Type 2 (singlet oxygen-mediated therapeutic action) agents or a single entity that integrates both units in the same mols. The compds. are designed to produce both Type 1 and Type 2 phototherapeutic effect at once using dual wavelength light source that will produce singlet oxygen and nitrene at the lesion of interest. This is accomplished using 3 types of formulation: homogenous mixts. of Type 1 and Type 2 agents alone, heterogeneous mixts. of Type 1 and Type 2 agents, or a single mol. entity containing both Type 1 and Type 2 functionalities. Suggested as single mol. entities are dyes (cyanines, porphyrins, phthalocyanines, etc.) conjugated to both organic azides and to biomol. targeting agents such as receptor (somatostatin, steroid, carbohydrate, etc.)-binding mols.

=> s l4 not l5

L6 9 L4 NOT L5

=> d l6 ibib abs hitstr tot

L6 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:451835 CAPLUS

DOCUMENT NUMBER: 115:51835

TITLE: Synthesis of quinazoline dyes containing azido group and their application

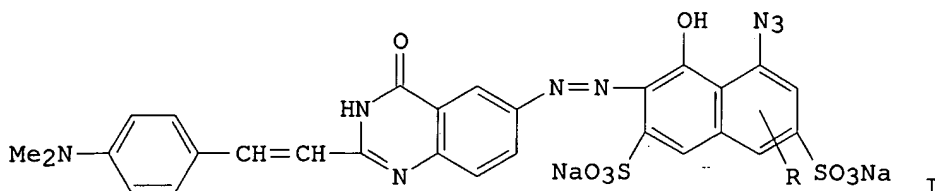
AUTHOR(S): Naik, V. R.; Desai, K. R.

CORPORATE SOURCE: Dep. Chem., South Gujarat Univ., Surat, 395 007, India

SOURCE: Journal of the Institution of Chemists (India) (1990),

62(4), 171-2  
CODEN: JOICA7; ISSN: 0020-3254  
Journal  
English

DOCUMENT TYPE:  
LANGUAGE:  
GI



AB The title dyes I (naphthalene moiety derived from H acid, J acid, Chicago acid, R acid, 1,2,4-acid, or Peri acid or 2-aminophenol or 3-aminophenol), useful for dyeing nylon fibers, are prepared by the coupling of diazotized 2-styryl-(4-dimethylamino)-6-amino-4-oxoquinazoline with the above-named coupling components, followed by reaction of the monoazo intermediates with NaN<sub>3</sub>. M.ps., but no color data, for all of the prepared dyes are presented. Dyeing apparently takes place by a nitrene mechanism (no data).

L6 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:581232 CAPLUS

DOCUMENT NUMBER: 113:181232

TITLE: Mechanism study of deep-UV irradiated poly(methyl methacrylate)-azide resist system

AUTHOR(S): Han, C. C.; Corelli, J. C.

CORPORATE SOURCE: Cent. Integr. Electron., Rensselaer Polytech. Inst., Troy, NY, 12180-3590, USA

SOURCE: Radiation Effects and Defects in Solids (1989), 111-112(1-2), 45-58

CODEN: REDSEI; ISSN: 1042-0150

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The photochem. of resist films of PMMA containing a high concentration (25 weight%) of an

aromatic azide was studied. Both p-azidobenzoic acid (PABA) and 2,6-bis(4-azidylbenzylidene)-4-methylcyclohexanone(2,6-bisazide) were used as the azide compds. Chemical anal. of the photoproducts of deep-UV irradiated PMMA-azide films showed that the products contained unreacted azide compound, primary amine, azo dye, and PMMA with pendant secondary amines formed by nitrene insertion reactions. Formation of secondary amines resulting from nitrene insertion to the PMMA chain is mainly responsible for both the dissoln. rate retardation and the image reversal observed in the exposed PMMA-azide resist.

L6 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1980:496660 CAPLUS

DOCUMENT NUMBER: 93:96660

TITLE: Studies on the thermal fixation of sulfonylnitrene reactive dyes on unmodified poly(m-phenylene isophthalamide)

AUTHOR(S): Fagbule, M. O.

CORPORATE SOURCE: Chem. Dep., Univ. Ilorin, Ilorin, Nigeria

SOURCE: Textilveredlung (1980), 15(5), 172-5

CODEN: TXLVAE; ISSN: 0040-5310

DOCUMENT TYPE: Journal

LANGUAGE: German

AB Dyeings fast to washing and dry cleaning are obtained when poly(m-phenyleneisophthalamide) [24938-60-1] fibers dyed with monoazo reactive dyes containing azidosulfonyl groups are dried at low temps. and briefly subjected to dry heat at 180°. The degree of fixation is substantially increased when electron-donating groups are introduced into a position ortho or para to the sulfonylazide group.

L6 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1975:565695 CAPLUS  
DOCUMENT NUMBER: 83:165695  
TITLE: Dyeing textile fibers  
INVENTOR(S): Pullan, Peter J.  
PATENT ASSIGNEE(S): Kodak Ltd., UK  
SOURCE: Brit., 7 pp.  
CODEN: BRXXAA  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1395885	A	19750529	GB 1971-40109	19720824
PRIORITY APPLN. INFO.:			GB 1971-40109	A 19720824

GI For diagram(s), see printed CA Issue.

AB Acrylic, cellulose acetate, nylon, and polyester fibers were dyed by heating in nonaq. solution with carbene and nitrene radical-generating dyes. Thus, nylon-6,6 was padded with 4.0 g azo dye (I) [56631-69-7] in 100.0 ml DMF and 900.0 ml Cl<sub>2</sub>C:CCl<sub>2</sub>, dried at 120°, and thermofixed 2 min at 200° giving a yellow shade of good fastness to light and washing.

L6 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1973:480335 CAPLUS  
DOCUMENT NUMBER: 79:80335  
TITLE: Dyes containing azidosulfonyl groups  
INVENTOR(S): Shuttleworth, Leslie  
PATENT ASSIGNEE(S): Eastman Kodak Co.  
SOURCE: Ger. Offen., 25 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2252785	A1	19730510	DE 1972-2252785	19721027
GB 1406996	A	19750924	GB 1972-26795	19721026
PRIORITY APPLN. INFO.:			GB 1971-50339	A 19711029
			GB 1972-26795	A 19720608

AB Fiber-reactive azidosulfonyl group-containing azo dyes I (R = H, Cl, R<sub>1</sub> = substituted phenyl, 6-substituted-2-benzothiazolyl, Q = CONH, NHCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe, NHCONH, NHCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>) and anthraquinone dyes II (R<sub>2</sub> = H, NH<sub>2</sub>, NHMe, R<sub>3</sub> = H, Me Q<sub>1</sub> = -p-NHC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CH<sub>2</sub>O<sub>2</sub>CNH, NHCH<sub>2</sub>CH<sub>2</sub>O<sub>2</sub>CNH, NHCONH) were prepared and were used to dye polyamide fiber fast shades. Thus, a mixture of 5,2-Me(HO)C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> .far. PhNH<sub>2</sub> was treated with m-ClOCC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl was refluxed for 30 min and NaN<sub>3</sub> was added to give azo dye I (R = H, R<sub>1</sub> = 5,2-Me(HO)C<sub>6</sub>H<sub>3</sub>, m-SO<sub>2</sub>N<sub>3</sub>, Q = CONH) [41117-97-9], fast yellow on polyamide fibers; anthraquinone dye II(R<sub>2</sub> = NHMe, R<sub>3</sub> = H, Q<sub>1</sub> = p-NHC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>CH<sub>2</sub>O<sub>2</sub>CNH, m-SO<sub>2</sub>N<sub>3</sub>) [41117-87-7] was prepared from 1- methylamino-4-(4-β-hydroxyethylphenyl)amino anthraquinone and m-N<sub>3</sub>SO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>NCO. The other I and II were similarly prepared

L6 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1973:45020 CAPLUS  
DOCUMENT NUMBER: 78:45020  
TITLE: New fiber-reactive dyes for hydrophobic fibers  
AUTHOR(S): Griffiths, J.; Fagbule, M.; McDarmaid, R. I.  
CORPORATE SOURCE: Dep. Colour Chem. Dye., Univ. Leeds, Leeds, UK  
SOURCE: Textilveredlung (1972), 7(12), 807-10  
CODEN: TXLVAE; ISSN: 0040-5310  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Azide fiber-reactive dyes (I, R = H, NO<sub>2</sub>, Me<sub>2</sub>N, R<sub>1</sub> = H or Me, Q = SO<sub>2</sub>, s-triazinylamino, m = 1 or 2, n = 0 or 1) are applied from a dispersion to polypropylene fibers or films and are photolytically (uv) or thermolytically decomposed to give a nitrene intermediate which reacts with the substrate by an insertion reaction. Photolytic decomposition fixes the dye only on the surface while decomposition at 140.deg. gives a fixation of 26-58%. To obtain high fixation yields, high temperature is needed which is not always possible since it may be above the m.p. of the fiber.

L6 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1973:44975 CAPLUS  
DOCUMENT NUMBER: 78:44975  
TITLE: Fast azo dyeing of fibers and shaped articles  
INVENTOR(S): Kuroki, Nobuhiko; Komatsu, Kiroku; Tamura, Shuji; Matsumoto, Hiroyuki  
PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd.  
SOURCE: U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3695821	A	19721003	US 1970-90873	19701118
GB 1294989	A	19721101	GB 1970-1294989	19701120
PRIORITY APPLN. INFO.:			JP 1969-93357	A 19691122

AB Fibers and shaped articles prepared from nonpolar fibers of hydrophobic polymeric hydrocarbons, chlorinated polymeric hydrocarbons, or polyesters containing a Me, CH<sub>2</sub>, or methine group or a benzene nucleus were fast-dyed using a dye containing a sulfonyl azide group. The dyed fibers were heated to decompose the sulfonyl azide to sulfonyl nitrene, which formed a covalent bond with the fiber, and were washed to yield the sublimation-resistant dyed fiber. Thus, 100 parts Tetron polyester cloth was treated in a dyebath containing H<sub>2</sub>O 4,000, Na oleyl sulfate 1, 4-[4-(N-methylanilino)phenylazo]benzenesulfonyl azide (I) [37437-30-2] 1.5, and a condensate of alkyl naphthalenesulfonic acid 1.5 and Na polyalkyl naphthalenesulfonate 0.7 part at 130.deg. for 60 min. After water-washing, the dyed fiber was heated 30 min at 160.deg., and treated with DMF at room temperature to yield the orange-yellow cloth. After curing 1 min at 200.deg., the dyed cloth had alteration in color 4.5-5 class and bleed on Tetron 4.5-5 class, compared to alteration in color 1 class (brown change) and bleeding 1 class for a similar fabric dyed by high-pressure dyeing without the heat-treatment. Similar sublimation-resistant fabrics were obtained using anthraquinone and methine dyes containing the sulfonyl azide group.

L6 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1972:541477 CAPLUS  
DOCUMENT NUMBER: 77:141477  
TITLE: Azo and anthraquinone dyes and fluorescent whiteners

INVENTOR(S): for hydrophobic fibers  
 PATENT ASSIGNEE(S): Griffiths, John  
 SOURCE: Eastman Kodak Co.  
 Fr. Demande, 16 pp.  
 CODEN: FRXXBL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2083686	A5	19711217	FR 1971-11147	19710330
FR 2083686	B1	19760319		
GB 1344991	A	19740123	GB 1970-15169	19700331
PRIORITY APPLN. INFO.:			GB 1970-15169	A 19700331

AB The solvent fastness of 8 azo dyes, an anthraquinone dye, and a fluorescent whitener was improved for polypropylene, cellulose acetate, polyester, and nylon fibers by incorporation of a hydrazide or azide group which can form a nitrene group into mol. structure of the treating agent. Thus, diazotized p-aminobenzenesulfonylazide was mixed with dilute HCl containing PhNet2 and the resulting solution buffered with NaOAc to pH 5 to give 87% 4-[4-(diethylamino)phenylazo]benzenesulfonylazide (I) [36525-77-6] which colored nylon fibers yellow, cellulose acetate fibers red, and Terylene and Kodel polyester fibers orange shades that were fast to boiling iso-PrOH and DMF. Another dye was 1-(butylamino)-4-(2-azidosulfonyl-4-tolylamino)anthraquinone (II) [36525-78-7], and the fluorescent whitener was 3-phenyl-7-[2-azido-4-(diethylamino)-s-triazin-6-ylamino]coumarin (III) [34381-78-7].

L6 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1972:114802 CAPLUS  
 DOCUMENT NUMBER: 76:114802  
 TITLE: Reactive dyes via nitrene intermediate  
 AUTHOR(S): Komatsu, Kiroku; Tamura, Shuji; Kuroki, Nobuhiko  
 CORPORATE SOURCE: Fac. Eng., Univ. Osaka Prefect., Sakai, Japan  
 SOURCE: Kogyo Kagaku Zasshi (1971), 74(12), 2503-7  
 CODEN: KGKZA7; ISSN: 0368-5462  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese

AB Four reactive azo dyes I (R = H or Cl, R1 = H, OH, or Me, R2 = H, Et2N, or Me2N, R3 = H or Me), a reactive azobenzene dye (II) [34563-92-3], and a reactive naphthylazo dye (III) [2920-03-8] were prepared by coupling of diazotized 4,3-H2N(R)C6H3SO2NHNH2 with the appropriate couplers. Polypropylene (IV) [9003-07-0] and polyester films dyed with the dyes prepared required thermofixation at 150.deg. for 2 hr and at 160.deg. for 1 hr, and the fixation condition was too severe for IV fibers. Polyester fiber dyed with the dyes prepared had good sublimationfastness. Thermolysis of III in isooctane (a model compound for IV) at 140.deg. for 2 hr gave N-isooctyl-p-[(2-hydroxy-1-naphthyl)azo]benzenesulfonamide (V, R = isooctyl) [34558-99-1].

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